1: Gillin E-5 (1932-33)1936 SR9 Carib SR9

made a sort of picnic or field day. The women bring supplies of cassava bread and peppers, and build fires near the site of the poisoning for the purpose of cooking the fish, part of the catch being eaten as part of the picnic lunch. Usually the men have preceded the women to the spot early in the morning, built a fence across the water downstream and collected a supply of haiari root from which they have removed the bark and which they have split into shreds. Each man has also cut a club or beater of yarriyarri wood two and one-half to three feet long, with a smooth handle fitted to the hand and a head of larger diameter. They bring the shredded haiari and the clubs to a point in the stream where semi-submerged logs or rocks arise from the water, which, below this point, must be relatively quiet and sluggish so that the poison is not too quickly borne away. Each man takes an armful of haiari and his club and chooses a suitable rock or log on which to pound the haiari, while he stands in the water alongside. In the meantime the women and children have deployed downstream, armed with cutlasses and knives with which to kill the stupefied fish. Each man then takes a small bundle of his haiari root and begins systematically to pound it on the rock or log which he has chosen, dipping it frequently into the water to free the juice until the haiari is exhausted of its poison. The juice when first freed has a whitish milky appearance which clouds the water. It seems to be heavier than the water itself and turns a rusty red with age. In the shallows of the stream which has recently been poisoned one sees the reddish viscid remnant of the haiari which has collected on the bottom. There seems to be some mystery concerning the effects of the poison on the fish and the opinion among the Caribs is divided as to whether the haiari would actually kill fish or merely stun them. They become sluggish and tend to float belly upward on the surface, but I have noticed that a fish "poisoned" by haiari, even when apparently dead, quickly revives when put into fresh unpoisoned water. On the other hand, the Indians also use the juice of the haiari to poison the ground around the roots of the tobacco plants, in the belief that it poisons the root grubs which kill the plants.[1]

[1] See Roark, R. C., "Rotenone." *Industrial and Engineering Chemistry*, Vol. 25, June 1933, pp. 629–642: "Rotenone, $C_{23}H_{22}O_6$, a colorless, odorless, crystalline constituent of certain tropical fish-poison plants, is thirty times as toxic as lead arsenate as a stomach poison to silkworm, fifteen times as toxic as nicotine as a contact insecticide upon bean aphids, and twenty-five times as toxic as potassium cyanide to goldfish, and yet is harmless to birds and mammals

121 informants or locations, another dimension is added here. Individ-
114 uals can be identified and the establishment of trans-generational
124 continuity is possible.

121 Two areas of theoretical concern particularly lend themselves to
*177 investigation under the fortuitous circumstances of being able to
[161] trace changes occurring over time among a specific group. The first
is cultural change: the second, human population control mechanisms.

175 In regard to cultural change, until forty years ago the Caribs
*177 of the Upper Barama River were adapting to the equatorial rain
182 forest with essentially a lithic technology. They combined hunting,
[22] fishing, and collecting with a semi-nomadic form of horticulture.
[241] Currently, the majority of these Caribs are settled at a community
*177 known as Baramita Air Strip. They engage in wage employment, make
[465] use of regional markets for local products, participate in agricul-
[438] tural development programs, and benefit from national medical
[242] programs. From a position of relative isolation in the rain forest,
[657] this group has been increasingly encapsulated in the national
[161] political economy. Attending this development has been changes in
their population size and composition as well as internal organiza-
tion. These changes are a major focus of the present study.

121 In pursuing the analysis of these changes, cultural materialism
is relied upon as the most economical mode of explanation. Among
others, Harris (1968) has proposed that techno-environmental
determinants can serve in a comparative approach to cultural
adaptation. One example of this approach is Murphy and Steward's
comparison of the Mundurucu of Brazil and the Northeastern

824 direct plant-to-plant cycling characteristic of the rain forest
241 floral community, energy is diverted for human consumption. The diverse floral species are replaced with species selected to yield food sources. Fields are prepared and maintained in keeping with this use.

• 242 The soil is selected with regard to its role as a support for the
241 plants. A preferred site is a hillside. The gradient allows for drainage. Also, a mixture of sand and clay will deter the water retention which would rot root crops in predominantly clayey soil. The clay component of this mixed soil protects the seeds and young plants from the full impact of heat from direct sunlight. Only a small field, about one acre, is usually cut at one time. Field shapes tend to be circular. Tall trees are left on the periphery to allow partial shade on the seeds and young plants.

241 The cutting is done to allow burning just before the rainy
[221] seasons that occur from November to January and from May to July.
[132] Planting follows burning. Previously, fire and stone-edged imple-
241 ments alone were used. However, iron-edged tools are now common in
412 the Upper Barama area. Digging sticks for planting seeds remain in
[312] use.
*[77]

241 The different cultigens are intermingled, making use of micro-environmental conditions. For example, sugar cane plants may be located to take advantage of a few square feet along a creek bed. Pineapples may be placed in an ash line. Young tobacco plants may be located to be partially shaded by a stump until mature enough to tolerate the sun.